



STATEMENT OF BASIS
Page 1 of 2
BAQ Engineering Services Division

Company Name: US Department of Energy – Ameresco Federal Solutions
Permit Number: 0080-0144-CD

Permit Writer: Fatina Ann Washburn Clark
Date: DRAFT

DATE APPLICATION RECEIVED: August 17, 2015

FACILITY DESCRIPTION

The United States Department of Energy (DOE) owns the Savannah River Site (SRS) which processes and stores nuclear materials in support of the national defense and U.S. nuclear non-proliferation efforts. The site also develops and deploys technologies to improve the environment and treat nuclear and hazardous wastes left from the Cold War. The SRS complex covers 198,344 acres, or 310 square miles encompassing parts of Aiken, Barnwell and Allendale counties in South Carolina, bordering the Savannah River. The facility has wood and oil fired boilers capable of producing steam and electricity to support operations at the site. The Savannah River Site is considered an existing source under 40 CFR 70. Please refer to TV-0080-0041 for more information on the general site. Ameresco Federal Solutions (Ameresco), under contract to the DOE, obtained a construction permit for a new biomass-fired cogeneration plant (including two (2) large biomass boilers) to provide electricity and process steam to major areas of the SRS, and two (2) small biomass-fired steam generation units in the K and L Areas of SRS (0080-0144-CA). Additional permits include an 85.2 MMBtu/hr No.2 fuel oil fired limited-use backup boiler (0080-0144-CB) and a new 78.6 million Btu/hr biomass-fired cogeneration boiler with fuel oil backup to provide electricity and process steam to areas of the Savannah River Site (0080-0144-CC).

PROJECT DESCRIPTION

Ameresco is requesting to add two conditions to the permit to effectively make KBB-1 and TB-1 limited use boilers under 40 CFR 63, Subpart DDDDD. They are requesting to add a 10% average annual capacity factor to the permits for KBB-1 and TB-1. Ameresco is also requesting a limit of 13,052 MMBtu/yr for KBB-1 and 74,663 MMBtu/yr for TB-1. Additionally, Ameresco is requesting that TB-1 be renamed to back –up boiler (BB-1) in order to remove any confusion with the Subpart DDDD definition temporary boiler.

COLLOCATION DETERMINATION

The facility is collocated with the following permitted facilities at SRS:

0080-0041

United States Department of Energy/Savannah River Nuclear Solutions, LLC Savannah River Site

0080-0139

United States Department of Energy/Shaw AREVA MOX Services, LLC

EMISSIONS

FACILITY WIDE EMISSIONS		
Pollutant	Uncontrolled Emissions	Controlled/Limited Emissions
	TPY	TPY
PM	1322.06	77.49
PM ₁₀	1243.72	71.99
PM _{2.5}	1243.71	71.98
NO _x	498.48	351.67
SO ₂	2033.38	390.55
CO	349.40	349.40
VOC	47.46	47.46
Pb	0.197	0.197
H ₂ SO ₄	5.42	5.42
CO _{2e}	460,130	460,130
HAP (single - HCl)	8.32	8.32
HAP (total)	25.30	25.30

OPERATING PERMIT STATUS

Initial TV under review.

REGULATORY APPLICABILITY REVIEW

Regulation	Comments/Periodic Monitoring Requirements
Section II.E - Synthetic Minor	Applicable – This project is being public noticed in order for the new requirements to become



STATEMENT OF BASIS
Page 2 of 2
 BAQ Engineering Services Division

Company Name:	US Department of Energy – Ameresco Federal Solutions	Permit Writer:	Fatima Ann Washburn Clark
Permit Number:	0080-0144-CD	Date:	DRAFT

Regulation	Comments/Periodic Monitoring Requirements
	federally enforceable. It will be treated as a synthetic minor construction permit.
Standard No. 1	Applicable – No new requirements are being added for the boilers for this project.
Standard No. 3 (state only)	Not Applicable – KBB-1 and BB-1 combust only virgin fuels.
Standard No. 4	Not Applicable -
Standard No. 5	Not Applicable - The project does not have any processes that are subject to the standard.
Standard No. 5.2	Applicable – No new requirements are being added for the boilers for this project.
Standard No. 7	Not Applicable – This project does not trigger PSD. No new emissions are being added as a result of this project.
61-62.6	Applicable – No new requirements are being added for the boilers for this project.
40 CFR 60 and 61-62.60	Applicable - No new requirements are being added for the boilers for this project.
40 CFR 61 and 61-62.61	Not Applicable - This operation does not emit the pollutants subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).
40 CFR 63 and 61-62.63	Applicable - Subparts A and DDDDD (Boiler MACT) apply to the boilers. The facility requests a federally enforceable limit of a 10% average annual capacity factor to the permits for KBB-1 and TB-1. Ameresco is also requesting a limit of 13,052 MMBtu/yr for KBB-1 and 74,663 MMBtu/yr for TB-1 in order to qualify boiler as a “limited use” boiler under this subpart.
61-62.68	Not Applicable - The project does not have any of the regulated pollutants above the threshold quantities.
40 CFR 64	Applicable – No new requirements are being added for the boilers for this project.

AMBIENT AIR STANDARDS REVIEW

Regulation	Comments/Periodic Monitoring Requirements
Standard No. 2	No changes in modeling for this project.
Standard No. 7.c	No changes in modeling for this project.
Standard No. 8 (state only)	No changes in modeling for this project.

PUBLIC NOTICE

This construction permit will undergo a 30-day public notice period to establish synthetic minor limits in accordance with SC Regulation 61-62.1, Section II(N). This permit was placed on the SC DHEC Public Notice website on September 15, 2015. The comment period was open from September 15, 2015 to October 14, 2015.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.